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VOL. 3 NO. 13 MARCH 27, 1953

Cooperative ECONOMIC INSECT REPORT

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Issued by

BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE

AGRICULTURAL RESEARCH ADMINISTRATION

UNITED STATES DEPARTMENT OF AGRICULTURE

BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE

DIVISION OF INSECT DETECTION AND IDENTIFICATION

SECTION OF ECONOMIC INSECT DETECTION AND REPORTING

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Bureau serves as a clearing house and does not assume responsibility for accuracy of the material.

Reports and inquiries pertaining to this release should be mailed to:

Section of Economic Insect Detection and Reporting
Bureau of Entomology and Plant Quarantine
Washington 25, D. C.

Volume 3 March 27, 1953 No. 13

COOPERATIVE ECONOMIC INSECT REPORT

During the next few weeks many economic insects will make their initial appearance of the season in various sections of the United States. Reports of these appearances as well as deviations from normal conditions are very important. When observations of these conditions are made, it will be appreciated if you will send the information to the State clearing house. We were again reminded, at the North Central Branch Meeting of the Entomological Society of America, of the importance of accurate insect condition reports including date of observation, degree and extent of infestation. The reports can be used immediately in the State, then sent to the Bureau for incorporation into the Cooperative Economic Insect Report in order to present the National insect situation.

You might like to know something of the use or distribution of the Cooperative Report which is made possible through the voluntary reports of State, Federal, industrial and private entomologists and you should feel that you have a part in its release.

In May 1952 when the Report was first issued in its present weekly form, the mailing list included 1,645 names requiring 1,745 copies. By August the list had risen to 1,972 names and 2,278 copies. Issue #11 of Volumne 3 for March 13, 1953 required 3,053 copies to service 2,627 names. As an indication of the increase in distribution, during the period January 28 to March 13, records show 52 names added requiring 88 copies. There were seven requests for drops during the same period.

A survey of report distribution reveals a continual spread in the field of coverage. Foreign mailings require over 100 copies. In this country the report goes to : State and Federal insect control operations; State and Federal quarantine personnel; extension specialists, and agricultural agents; experiment station workers and research institutes; college professors, students, and vocational agriculture teachers; insecticide manufactures, formulators and dealers; equipment manufactures and distributors; ground and aerial applicators; farm loan and management agencies; cotton processing companies; banks, trust and insurance companies; farmers cooperatives; seed and fertilizer companies; real estate; lumber, canning and food processing companies; libraries, colleges and

universities; farm magazines, newspapers and radio stations; farmers, grain elevators; State public health agencies and medical doctors; vegetable growers and shippers; Federal agencies (other than Entomological); Weather Bureau, Civil Aeronautics Authority, Pure Food and Drug, Crop Insurance, Federal Loan Bank, Farm Credit Administration and Defense Department.

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Highlights of Insect Conditions

SMALL GRAIN PEST conditions in Texas, New Mexico, Oklahoma and Kansas during the past winter. (page 205).

ALFALFA WEEVIL survey in eastern states in 1952. (page 208).

PLUM CURCULIO appearing in peach orchards in numbers in Fort Valley, Georgia area. (page 211).

PEAR PSYLLA infestation in Yakima Valley, Washington heavier than usual. (page 211).

BOLL WEEVIL survival records in Madison Parish, Louisiana. (page 214).

First Reported Records of Season (by areas)

ALFALFA WEEVIL adults taken in Anne Arundel County, Maryland, March 24. PLUM CURCULIO adult taken in Fort Valley, Georgia area March 13. RED-BANDED LEAF ROLLER adults observed at Vincennes, Indiana March 17. MEXICAN BEAN BEETLE adult observed in Gadsden County, Florida area during week of March 16. COLORADO POTATO BEETLE observed in Charleston, South Carolina area March 16. In Gadsden County, Florida, during week of 16th.

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State Clearing Offices for Economic Insect Information

Kindly revise your State Clearing Offices list to read as follows:

Oklahoma Dr. D. E. Howell, Head
Department of Entomology
Oklahoma A. & M. College
Stillwater, Oklahoma

WEATHER BUREAU 'S 30-DAY OUTLOOK
mid-March to mid-April 1953

The Weather Bureau's 30-day outlook for the period from mid-March to mid-April calls for temperatures to average above seasonal normals west of the Mississippi, except for near normal along the West Coast. Eastern portions of the nation are expected to average near normal with the exception of below normal in the vicinity of the Great Lakes.

Rainfall is expected to exceed normal from the Ohio Valley eastward through the middle and north North Atlantic States, and along the West Coast. Elsewhere about seasonally normal amounts are indicated except for some deficiency in the Northern Plains and over the Southwest.

*This report released by the Weather Bureau on March 17.

A more detailed weather outlook - Average Monthly Resume and Outlook - is prepared by the Weather Bureau. To subscribe to this publication address application, with P. O. money order or check payable to Treasurer of the United States, and mail to Superintendent of Documents, Government Printing Office, Washington 25, D. C. Subscription price is $4.80 per year or $2.40 for six months, postpaid; minimum subscription six months.

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WEATHER OF THE WEEK ENDING MARCH 24, 1953

East of the Continental Divide unseasonably warm weather prevailed throughout the week in most sections. Average temperatures ranged from 4 degrees to 12 degrees above normal, with the greatest departures occurring in the Great Plains, Midwest, and Great Lakes Region. Maximum temperatures generally ranged in the 70's and 80's in the deep South. The 21st was the warmest day of the year in the north-central interior, when Des Moines and Davenport, Iowa, recorded high temperatures of 76 degrees; Rochester, Minn., 68 degrees; Indianapolis, Ind., and Lone Rock, Wis., 77 degrees, and in some sections of Kansas

maxima reached 85 degrees to 90 degrees on the 20th. Except at higher elevations no subzero minima were reported from northern sections or freezing south of the Ohio Valley. This abnormally warm weather east of the Rocky Mountains removed virtually all snowcover from agricultural regions, except in small sections along the North-Central Border. Vegetation in the southern two-thirds of this region continued to develop rapidly and remained from 10 days to 2 weeks ahead of normal. Thawing continued in the North and frost is mostly out of the ground in South Dakota, southern Minnesota, much of Wisconsin and southern Michigan. Ice is breaking up in the streams of southern and western South Dakota and southern Minnesota. The temperature averaged below normal by 1 degree to 5 dgrees in most sections of the Pacific States and about normal in the Great Basin of the far West. Orchard heating was necessary in the upper Sacramento Valley of California where freezing occurred on several nights.

Preicpitation for the week generally ranged from one-half inch to over two inches east of the Great Plains and in the Pacific Northwest. Elsewhere, totals were generally less than a quarter of an inch. Little or none fell in the Southwest and the western portions of the Great Plains. General rains occurred east of the Great Plains, except in the Middle Atlantic and New England States, on the 18th, 22d and 23d. These rains maintained excessive moisture in many sections, causing a further delay of soil preparation for spring crops. The abundant moisture, however, with the additional effect of abnormal warmth stimulated rapid growth of grains and pastures.

Strong drying winds and scanty rainfall increased the need for mositure in the western portion of the Great Plains. Small grains are suffering, and in western Oklahoma and Kansas stock water supplies are inadequate. In the Central Interior on the 21st and 22d strong winds that reached 73 m.p.h. at Des Moines, Iowa, caused minor damage in extensive areas. Also, on the 21st destructive local storms occurred in scattered sections of the Mississippi Valley States. In central and southern Minnesota where several small tornadoes were reported, 2 persons were killed and much property damage occurred. A severe wind-storm caused property damage in Eau Clair County, Wis. A hailstorm at Cedar Falls, Iowa, caused damage estimated at $250,000. Destructive windstorms and tornadoes also occurred in Arkansas and adjacent areas of other nearby States. Property damage resulting from the hailstorm occurring in ComancheCounty, Okla., on the 13th, has now been estimated at $2,000,000. (Summary Supplies by U.S. Weather Bureau)

CEREAL AND FORAGE INSECTS

PEA APHID (Macrosiphum pisi) - WASHINGTON - Samples have been taken weekly in the Gardena and Umapine alfalfa areas near Walla Walla since January. Pea aphids started to hatch early in January and were mostly hatched before the end of that month. Alfalfa is now from 3 to 6 inches high, with green, leafy stems; and aphids average near 1.5 per alfalfa tip. Severe frosts, with minima near 15 degrees, have held the aphid populations almost static since the middle of February. The population is high for this time of year, and favorable weather conditions may bring a rapid increase at any time. (W. C. Cook). MARYLAND - Rather common on alfalfa in Anne Arundel County; not heavy enough for damage but population building up. (T. L. Bissell).

GREENBUG (Toxoptera graminum) - TEXAS- Medium infestation in the north Texas area; however, will be controlled by predators and parasites if weather continues warm. (H. L. Chada).

ALFALFA WEEVIL (Hypera postica) - UTAH - Adults fairly numerous and causing some leaf damage in parts of Salt Lake and Tooele Counties. (G. F. Knowlton). MARYLAND - Adults found in alfalfa on 2 farms in Anne Arundel County, March 24. Small numbers taken by sweeping and plant examination; no larvae observed. (T. L. Bissell).

GRASSHOPPERS (Acrididae) - UTAH - Very few nymphs found to date in small grains, alfalfa and range in northern Utah in spite of the the advanced season. (G. F. Knowlton).

ARMY CUTWORM (Chorizagrotis auxiliaris) - OKLAHOMA - Now infesting the western half of Oklahoma, and can be found in practically all wheat fields and in many alfalfa fields. Numbers in wheat fields vary from less than one per square foot to from five to seven per square foot. Heavier infestation occurs next to short grass pastures, fence rows and wastelands, from where the "worms" are migrating. There has been some control, both with ground sprayers and airplanes. (C. F. Stiles).

CUTWORMS (Phalaenidae) - UTAH - Present but not very numerous in several alfalfa and fall-wheat fields examined in Tooele and Salt Lake Counties. (G. F. Knowlton).

CLOVER LEAF WEEVIL (Hypera punctata) - MARYLAND - Larvae found on alfalfa in Anne Arundel County, March 24, But no damage observed. (T. L. Bissell).

TWO-SPOTTED SPIDER MITE (Tetranychus bimaculatus) - ARIZONA - Appeared in very large numbers in one field of alfalfa on the Yuma Mesa. Control measures were applied. (D. M. Tuttle).

CLOVER MITE (Bryobia praetiosa) - ARIZONA - More numerous and damaging to alfalfa on the Yuma Mesa than previously noted. Infestations apparently hindering growth. Control measures being applied as there are few beneficial insects present. (D. M. Tuttle). Numerous homes invaded by this mite in Tucson area. (G. D. Butler). PENNSYLVANIA - Several reports of infestations in houses during Febraury and March. (J. O. Pepper).

SPITTLEBUGS (Cercopidae) - MARYLAND - Apparently starting to hatch; 2 nymphs found on dandelion in Anne Arundel County, March 24. (T. L. Bissell).

GREEN CLOVERWORM (Plathypena scabra) - FLORIDA - Appearing in small numbers on crimson clover in the Gadsden County area. (F.E. Guthrie).

BROWN WHEAT MITE (Petrobia latens) - UTAH - Infestations heavy enough in small grains to justify watching for outbreak this season. (G. F. Knowlton).

A LEAFHOPPER (Dikraneura carneola) - UTAH - Numerous and causing leaf-feeding spots in many well-advanced fields of fall grains in Tooele and Salt Lake Counties. (G. F. Knowlton).

ARMYWORM (Pseudaletia unipuncta) - MISSISSIPPI - Larvae nearly full grown occurring in large numbers and feeding on a row of Dutch Iris in one locality in Itawamba County. Also collected from grass at State College. (Cochran and Hutchins).

A SPIDER MITE (Paratetranychus pratensis) - WASHINGTON - Building up in serious numbers on grass grown for seed at Sunnyside. (H.S. Telford).

Small Grain Pest* Conditions in Texas, New Mexico, Oklahoma, and Kansas
December 1, 1952 to March 7, 1953
(BEPQ and Agr. Exp. Stations of Texas, New Mexico, Oklahoma and Kansas cooperating).

ARMY CUTWORM (Chorizagrotis auxiliaris) reported infesting small grain over a wide area of Texas, Oklahoma, Kansas and New Mexico; however, in most fields infestation was classed as light, 1 to 2 per square foot. Some severe infestations have occurred in Tillman, Cotton, Jackson and Kiowa Counties, Oklahoma; and in Cottle, Childress, Hardeman, Wichita and Wilbarger Counties, Texas.

GREENBUG (Toxoptera graminum) - Louisiana - Light infestations found on oats at Rice Experiment Station, Crowley. Texas - Infestations during the winter have caused a few typical dead spots in fall-seeded oats in Kendall and Kerr Counties; however, by the middle of February parasites and predators, including Lysiphlebus testaceipes, lady beetles and lacewinged flies, had almost eliminated this infestation. Greenbugs were first observed in the northern part of the Texas Panhandle near Gruver in Hansford County on January 5. Examination of fields throughout the Panhandle showed the infestation to be widely distributed and general in the northern counties, although at a very low population level. Overall populations have declined gradually since January 5 and in the February 27 survey they were at the lowest level since discovery. High populations of predators were found at sites of infestations. The ratio of predators to greenbugs is believed to have been of great importance this season, and the role of nabids is particularly noteworthy. Four species in this family have been collected, and laboratory studies indicate the most commonly found species to be very active and capable in destroying greenbugs. This species, as yet unidentified, ate an average of 15 greenbugs overnight in one study. Other species have not fed on greenbugs under laboratory conditions. Another item believed to be of considerable importance in predatory ability is the cold tolerance of the principal nabid species. The threshold of activity of this species is 42 to 43 degrees F. in the field, while coccinellids reach similar stages of activity about 12-14 degrees higher temperature. Temperatures favorable for predatism have undoubtedly been of great importance in holding greenbug numbers in check (in the northern Panhandle counties). For instance, only 5 days of the 26 days in January, subsequent to greenbug discovery, had temperatures below the seasonal averages for those respective days. Some maxima

* Except hessian fly.

were as much as 25 degrees F. above normal. Oklahoma - Greenbugs were found in Kay, Garfield, and Kingfisher Counties in January and in Canadian County in February. All of these infestations were rated as noneconomical (less than 10 per linear foot of row). The only greenbugs found were in early-seeded fields that received sufficient rainfall in September to cause emergence. Kansas - A few greenbugs were found in December and January in early-seeded wheat in southwestern Kansas.

OTHER APHIDS - Apple grain aphid (Rhopalosiphum prunifoliae) was found on early-seeded wheat in Canadian and Kingfisher Counties, Oklahoma. This species has been found in several locations in the Texas Panhandle and was especially abundant (8 - 10 per linear foot) in some fields in Clarendon and Armstrong Counties. An unidentified yellow species of aphid was collected on wheat in Parmer County, Texas. This species was capable of causing local necrotic feeding lesions on wheat leaves.

CHINCH BUGS (Blissus leucopterus) were found in volunteer wheat in Pottawatomie, Riley, Marshall, Dickinson, Ottawa, Lincoln, and Nemaha Counties, Kansas. It is rather unusual to find this insect in small grains at this time of year, and it appears that those found were hibernating in volunteer clumps.

MITES - Paratetranychus pratensis was present in 17 of 22 fields surveyed in the Clovis, New Mexico area in December. Counts were made on from 1 to 10 infested plants in each field. These plants averaged 2.6 mites per plant. In early February all of 12 fields in which counts were made were found infested at average rate of 22.3 mites per plant. Heavily infested plants showed signs of injury. A rather severe outbreak of Penthaleus major occurred in Texas during January and early February. The most severe infestation was in northern Texas (Dallas-Denton area); however, the infestation reached at least as far south as Waco and McGregor. In some fields the population was more than 350 per linear foot. Petrobia latens infested small grains during the winter throughout the Texas Panhandle and as far south as Kendall and Kerr Counties. Moderate infestations have been found in the Wichita Falls-Vernon-Childress area, especially in Wilbarger and Hardeman Counties. Many trashy and stubble-mulched fields in the panhandle area have populations heavy enought to cause some foliage symptoms, and the droughty conditions make the mite threat serious at many locations. Light infestation was found in the Clovis, New Mexico area in February. In Feb-

ruary, infestations averaged from 3 to 15 mites per linear foot in all fields that had been in small grains in 1951-52 in Jackson, Tillman, Greer and Kiowa Counties, Oklahoma.

Petrobia latens Survey Results in Kansas: Some detailed surveys were made in Finney, Haskell, Grant, Stanton, Stevens, and Seward Counties during January and February by C. F. Henderson and E. W. Tilton. The mite population averaged 9 per plant in 6 fallow fields in Stanton County on January 28. The infestation in Grant County averaged 2 per plant during the same survey. Examinations in 18 fields in 6 southwestern Kansas counties in February showed as high as 70.4 mites per plant and an average of 16.4. A study was made on the effect of winter conditions on brown wheat mite population in Finney and Haskell Counties. Infestation counts were made at monthly intervals in 6 continuous and 6 fallow-land fields in southwestern Kansas. The average population per plant was as follows:

	October	November	December	January	February
Continuous	4.5	5.6	2.3	1.4	11.8
Fallow Land	.04	.6	.5	.4	2.9

Populations appeared to increase during October and early November. Unfavorable weather conditions in November caused a reduction which continued throughout December and early January. Favorable weather followed the January counts, and the population within the area increased tremendously. This trend appeared to be general throughout the southwestern portion of the State. It is evident that brown wheat mite populations are relatively high and well distributed over southwestern Kansas. Considerable leaf injury was noted in the area around Johnson and in the heavily-infested fields in the vicinity of Liberal. If drought conditions continue, mite damage may be expected over a widespread area. (Compiled by R. G. Dahms).

The Alfalfa Weevil in the Eastern States - 1952

Alfalfa weevil (Hypera postica) has been the most important pest of alfalfa in the West for nearly fifty years. The insect was probably brought to this country from southern Europe near the turn of the century and the first recorded noticeable injury occurred in the vicinity of Salt Lake City, Utah, in 1904. Since that time the insect has spread in the West to include within its range areas in the states of Colorado, Wyoming, Nebraska, South Dakota, Montana, Idaho, Oregon, Nevada, Arizona, California, and New Mexico (see map).

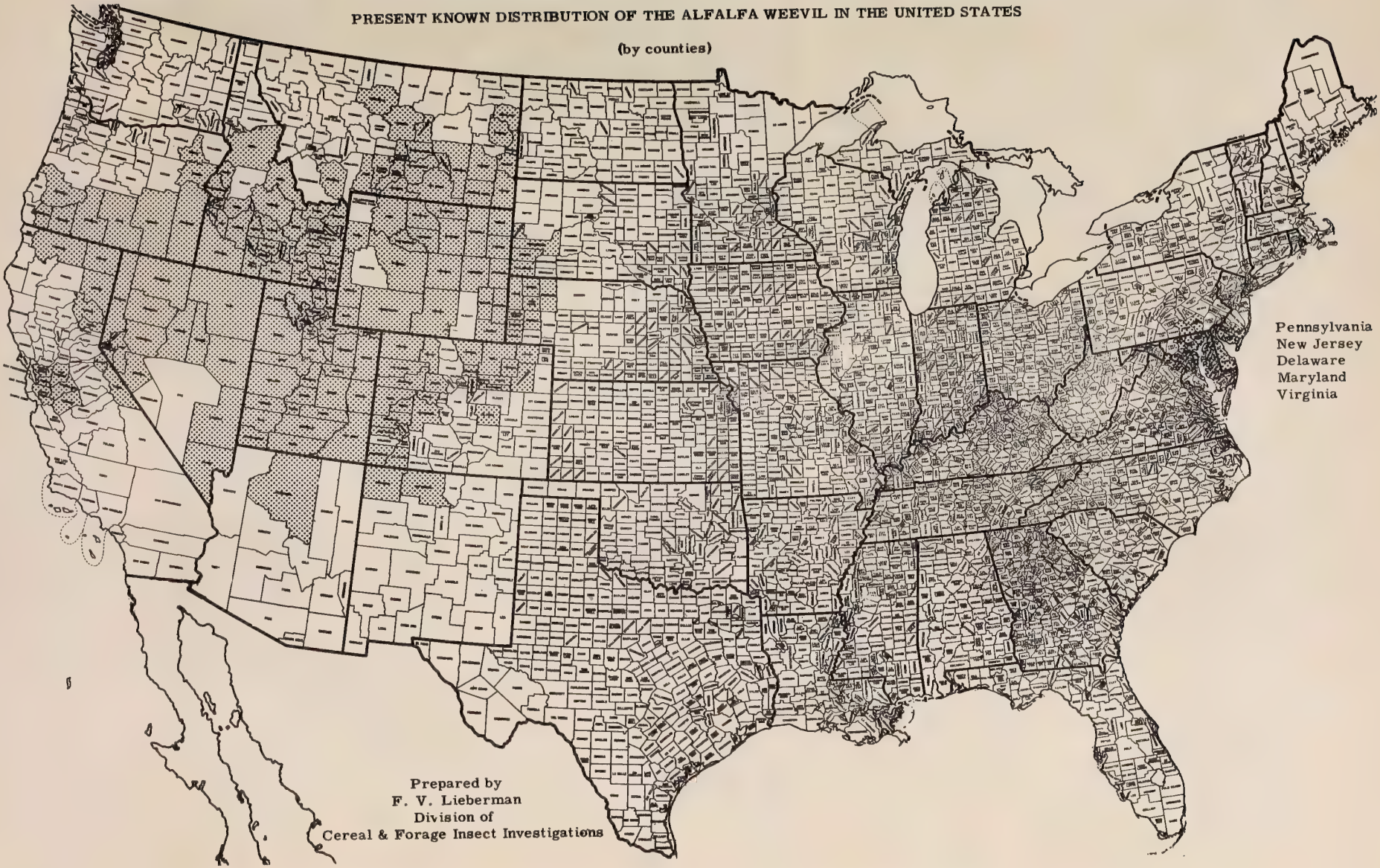
Early in 1952 weevils were found for the first time in the Eastern United States. Mr. T. L. Bissel, Extension Entomologist of Maryland found infestations in Baltimore and Anne Arundel Counties, Maryland, in April. The insect was later collected in several other Maryland counties and in Delaware, Virginia, Pennsylvania, and New Jersey.

Following discovery of the alfalfa weevil, it was decided to determine the distribution of the pest in Maryland through scouting in connection with routine surveys for other insects. This was agreed upon in preference to undertaking the added expense and manpower requirements of a separate intensive survey to delimit the area of infestation. The scouting work accomplished covered the State quite well and indicated that the following general conditions seemed to prevail: (1) scattered and isolated infestations in Anne Arundel (though general in northern tip), Caroline, Carroll, Dorchester, Howard, Kent, Montgomery, Prince Georges, Queen Annes, Talbot, Wicomico and Worcester Counties; (2) general infestation (damage observed) in Baltimore, Cecil and Harford Counties. During the scouting work, 148 farms were visited in 23 counties. Weevils, causing extensive damage, were found on each of eleven farms scouted in Baltimore County. The same condition was found on the 6 farms scouted in Harford County and on the 3 scouted in Cecil County. A more intense survey will be necessary in this State in 1953, if it is thought desirable to delimit all infestations and measure the populations.

On April 17, 1952, H. E. Milliron collected the first specimen of this pest to be taken in Delaware when he took one adult on alfalfa at Greenwood in Sussex County. Twelve days later five additional adults were collected in the same field. The distribution of the insect was ascertained as a

PRESENT KNOWN DISTRIBUTION OF THE ALFALFA WEEVIL IN THE UNITED STATES

(by counties)



Prepared by
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part of the routine insect survey work, and by May 22 it was known to occur throughout the State in approximately 6,000 acres of alfalfa. The most severe and extensive damage was noted in fields west of Greenwood. These fields were near or on the state line adjacent to Caroline County, Maryland, in which a weevil infestation was found on the single farm examined. This suggests that the infestations may have had a common origin. Alfalfa weevils caused only slight injury to approximately 5,000 acres of alfalfa in Delaware. An additional 1,000 acres was damaged in spots with damage ranging from moderate to heavy. Most injury was caused by first-generation larvae on the early growth of alfalfa. New adult beetles (not overwintering specimens) began to emerge late in May. Late in June and throughout July small larvae were again prevalent and conspicuous damage to second-growth alfalfa was noted over wide areas, suggesting the possible occurrence of a second or partial second generation in this State.

The survey in New Jersey was a cooperative program between the Department of Entomology at the New Jersey Agricultural Experiment Station and the Bureau of Entomology of the New Jersey State Department of Agriculture that began in late spring and continued through October. The first adult weevils were found in New Jersey on June 17. During scouting operations in June, larvae were collected in Cumberland, Salem, Gloucester, and Atlantic Counties. During July, Cape May County was added to this list. The initial collections were made in southern New Jersey and scouting was then concentrated in that area in an attempt to delimit the infested area. At present this area is known to be in the counties bordering the Delaware River and Bay and west of a line extending from Mickleton to Mullica Hill to Millville and to Atlantic City. The Atlantic County infestation is at the Atlantic City Race Track and is 25 to 30 miles from the nearest known infestation and it is thought this specific infestation may have originated from weevils introduced in hay from outside the State. However, the infestation may be more general than is indicated above since the discovery of the weevil was near the end of the first brood larval period limiting the most effective scouting period. The heaviest infestations were found in the Bridgeton-Salem area and in the Cape May-Rio Grande area. Larvae were collected in these areas until mid-July and a few adults were netted near Quinton in Salem County. At no time did the larval collections yield many specimens. Even in the heaviest areas only 1 or 2 larvae were obtained per 100 sweeps.

Adult weevils collected August 11 at Quinton were caged at New Brunswick and several batches of eggs were obtained. None of these had hatched 24 days following the date of deposition. Under field conditions eggs laid in green stems before September 1 would be removed with the third cutting of hay and probably would not survive. Observations on the life history of the weevil in New Jersey in 1952 are indicative of what may be expected of the pest there, but they are not conclusive because it was not possible to follow the cycle through a full year. Additional observations in succeeding years will augment these preliminary findings.

On May 15, 1952, F. W. Poos, while making observations on forage insect conditions, collected specimens of the alfalfa weevil in Loudoun and Fairfax Counties, Virginia. While on a similar trip in Pennsylvania May 23, Dr. Poos also collected specimens of the weevil in York and Lancaster Counties. No further finds were made in either Virginia or Pennsylvania, although entomologists in both states made numerous field checks and collections searching for the pest.

No alfalfa weevils were collected in New York during extensive surveys made in 29 counties by personnel of the Department of Entomology at Cornell University and horticultural inspectors of the New York State Department of Agriculture and Markets, Bureau of Plant Industry.

Very little alfalfa is grown in New Hampshire and the few examinations that have been made in this State have revealed no alfalfa weevils. The amount of alfalfa grown in Maine is slightly greater than in New Hampshire, but no special observations were made for alfalfa weevils. In Rhode Island some late-season observations were made but no weevils were seen. No definite surveys for alfalfa weevil were made in the States of Connecticut, Massachusetts, and Vermont.

Alfalfa is an important crop in the thirteen states considered in this discussion. During the period 1939-1948 the average annual acreage of this crop was 995,000, total for all 13 states. During the same period the average annual production was nearly 2,000,000 tons. New York, Pennsylvania, and Virginia have been the leading producers during that time. Control of the alfalfa weevil in some areas may be necessary in order to produce the crop economically. Indications from present knowledge are that the behavior of alfalfa weevil in the East may be somewhat different from that in the Western States and until these characteristics are studied, it will not be known whether alterations in the established control plan will be necessary or advisable. (C. W. Shockley).

FRUIT INSECTS

PLUM CURCULIO (Conotrachelus nenuphar) - GEORGIA - Winter survival of adults in hibernation at Fort Valley was 90.1 percent, which is the highest percentage of winter survival in Georgia during 33 years of observations and records. Of 674 adults placed in Bermuda grass and oak leaves last fall, 607 were found to be alive on February 27, 1953. The minimum temperature at Fort Valley during the winter of 1952-53 was 21 degrees F. recorded on December 15, 1952, which was not low enough to prove fatal to hibernating plum curculios. The percentage of the hibernating population appearing in peach orchards this spring is, therefore, expected to be greater than that of an average year, but this is not an alarming situation since the population entering hibernation last fall was generally lighter than that of an average year. First adult (a female containing a fully developed egg) of the season was taken March 13 from a peach tree, and adults were appearing in peach orchards in numbers by March 16, when an average of as many as 5.4 per tree was taken from trees on the outside row of one orchard, following mean temperatures of 67 degrees on March 13, 79 on March 14 and 68 on March 15. (O. I. Snapp).

CODLING MOTH (Carpocapsa pomonella) - INDIANA - Carryover of codling moth is heavier than during the past few seasons in the Vincennes area. Winter mortality was very light. Larvae examined on trunks March 16 had only 7.4 percent dead in 162 larvae. In one local orchard it was not difficult to find as many as 100 larvae per tree trunk (D. W. Hamilton).

RED-BANDED LEAF ROLLER (Argyrotaenia velutinana) - INDIANA - Adults first observed in orchards near Vincennes on March 17. No egg masses have been located as of this date. Winter carryover for the area is light owing to light infestation in 1952. (D. W. Hamilton).

PEAR PSYLLA (Psylla pyricola) - WASHINGTON - Infestation is very much heavier this year in the Yakima Valley than usual. Eggs have just started hatching, which is about three weeks earlier than previously recorded. The season is also about three weeks earlier than last year, and apricots should be in full bloom by March 20. (E. J. Newcomer).

APPLE APHID (Aphis pomi) - PENNSYLVANIA - Hatching in southern Adams County, March 19. (J. O. Pepper). INDIANA - Hatched nymphs readily found March 17 in Vincennes area. (D. W. Hamilton).

APPLE GRAIN APHID (Rhopalosiphum prunifoliae) - DELAWARE - Hatching in large numbers; first observed in 1952 on April 8. (Late News, Univ. Del.). PENNSYLVANIA - Hatching in southern Adams County, March 19. (J. O. Pepper). ILLINOIS - Aphids, apparently this species, hatching in southern areas, March 18. (S.C. Chandler).

PECAN NUT CASEBEARER (Acrobasis caryae) - FLORIDA - Overwintered larvae active and feeding on opening buds in the Monticello area March 13. (A. M. Phillips).

HICKORY SHUCKWORM (Laspeyresia caryana) - FLORIDA - Moths emerging from pecan shucks in screened cages in orchard March 2, and from pecan shucks in similar cages in insectory at Monticello March 3. (A. M. Phillips).

TRUCK CROP INSECTS

APHIDS (Aphidae) - SOUTH CAROLINA - Cabbage aphid (Brevicoryne brassicae) populations have increased somewhat during the last two weeks in the Charleston area, but remain generally light as result of a hymenopterous parasite. A fungus disease is also present. Light infestation of green peach aphid (Myzus persicae) in one potato planting. A few pea aphids (Macrosiphum pisi) are infesting garden peas. (W. J. Reid). FLORIDA - Two infestations of green peach aphids have been discovered on volunteer tobacco plants closely adjacent to tobacco plant beds in Gadsden County. No aphid infestations have been found or reported in the beds which, in nearly all instances, have received aphicidal applications. (L. M. May). CALIFORNIA - Cabbage aphid has been of minor importance on cabbage in the Whittier area. (R. E. Campbell).

VEGETABLE WEEVIL (Listroderes costirostris obliquus) - FLORIDA - Larvae causing moderate injury in occasional tobacco plant beds in Gadsden County area. (L. M. May). MISSISSIPPI - Feeding on turnips, spinach and other vegetable crops in Jones County. (R. Z. Pepper). CALIFORNIA - Infesting spinach fields in Orange County. (R. E. Campbell).

MEXICAN BEAN BEETLE (Epilachna varivestis) - FLORIDA - First adult of the season observed this week on early string beans in the Gadsden County area. (L. M. May, March 18).

BANDED CUCUMBER BEETLE (Diabrotica balteata) - FLORIDA - Infesting Irish potatoes and young spring turnips in the Gadsden County area. (L. M. May).

COLORADO POTATO BEETLE (Leptinotarsa decemlineata) - SOUTH CAROLINA - First adult of season in Charleston area observed March 16. (W. J. Reid). FLORIDA - First appearance this season on Irish potatoes in the Gadsden County area. (L. M. May, March 18).

LEAF MINERS - TEXAS - Attacking cantaloups in Lower Rio Grande Valley. Infestation warrants insecticidal measures. (Wene and Griffith).

SEED-CORN MAGGOT (Hylemya cilicrura) - CALIFORNIA - Feeding in terminal buds of spinach in some fields in Orange County. (R. E. Campbell).

CABBAGE LOOPER (Trichoplusia ni) - PENNSYLVANIA - Severe infestation in greenhouse on snapdragons in Cambria County. (J. O. Pepper).

WESTERN BLACK FLEA BEETLE (Phyllotreta pusilla) - CALIFORNIA - Slight root damage on turnips in Los Angeles County, indicating that this insect may be active all year. Heavy damage occurred in September 1952. (R. E. Campbell).

ONION THRIPS (Thrips tabaci) - CALIFORNIA - Building up on bulb onions in Los Angeles County, but not heavy enough yet to require insecticidal control. (R. E. Campbell).

STRAWBERRY APHID (Capitophorus fragaefolii) - CALIFORNIA - Building up to injurious numbers on strawberries in Orange County. (R. E. Campbell).

TWO-SPOTTED SPIDER MITE (Tetranychus bimaculatus) - CALIFORNIA - Still occurs in injurious numbers on strawberries in Orange County, and regular treatments are required. (R. E. Campbell).

COTTON INSECTS

Spring Boll Weevil Ground Trash Examinations, Madison Parish, Louisiana.

Two hundred ground trash samples were collected and examined for surviving boll weevils in Madison Parish from March 2 to 18, 1953. The number of weevils per acre found per point (10samples) ranged from 0 to 6,050. The average was 1,149 weevils per acre. This figure is 89 percent of the number (1,295) found in hibernation in the fall examination of 1952, and represents a very high survival. The average number found in this spring's examination is about 1 1/2 times the average found during the past 17 years. There are only four years (1945, 1949, 1950, and 1951) in which a greater number was found than in 1953. The table below shows the summary of fall and spring ground trash examinations made at Tallulah, Louisiana from the spring of 1936 through the spring of 1953. (R. C. Gaines).

Year	Fall Examinations		Spring Examinations		Per Cent Survival
	Number of Samples*	Live Boll Weevils per Acre	Number of Samples*	Live Boll Weevils per Acre	
1936			189	141	
1936-37	16	2,118	48	50	2
1937-38	56	519	78	186	36
1938-39	98	1,284	118	226	18
1939-40	82	2,243	89	190	8
1940-41	104	721	200	920	128
1941-42	150	1,484	200	327	22
1942-43	200	2,916	200	750	26
1943-44	250	2,488	120	625	25
1944-45	160	2,435	160	1,512	62
1945-46	200	4,199	200	1,065	25
1946-47	200	2,698	210	426	16
1947-48	150	1,178	150	177	15
1948-49	150	2,146	150	1,710	80
1949-50	200	3,231	200	2,202	68
1950-51	200	4,586	200	1,742	38
1951-52	200	1,367	200	629	46
1952-53	200	1,295	200	1,149	89

*Each sample 18 square feet.

Cotton Insect Conditions in Lower Rio Grande Valley, Texas: CUTWORMS continue damage in scattered fields in all areas, but reports of damage considerably less this week. THRIPS damage seems to be increasing, especially where cotton is being grown in close proximity with onions. APHID reports, especially in the Raymondville area, are still rather numerous. Control measures are being applied in several areas throughout the Valley. FALSE CHINCH BUG (Nysius ericae) reported in several fields in the San Benito and Rio Hondo area. These pests are causing spotted damage and control measures have been applied in several instances. LEAF MINERS continue to cause some damage to seedling cotton. COTTON FLEAHOPPERS(Psallus seriatus) have been found in large numbers in the San Benito area on horsemint and evening primrose. (R. D. Griffith, March 19).

INSECTS AFFECTING MAN & ANIMALS

CATTLE LICE - PENNSYLVANIA - Little blue cattle louse (Solenopotes capillatus) and long-nosed cattle louse (Linognathus vituli) were very abundant during the winter months on both beef and dairy animals. Occasional infestations of short-nosed cattle louse (Haematopinus eurysternus) were found. (J. O. Pepper).

NORTHERN FOWL MITE (Bdellonyssus sylviarum) - PENNSYLVANIA - Infestation in large poultry plant in Butler County. (J. O. Pepper).

COMMON CATTLE GRUB (Hypoderma lineatum) - OKLAHOMA - Cows noticed running from heel flies for the first time this season on March 18 near Hennessey in Kingfisher County. The weather has been unusually warm for the past two weeks. (C. F. Stiles).

Recent Important Interceptions at Ports of Entry

Living giant African snails (Achatina fulica) were intercepted recently on returned military cargo from Guam at San Pedro, California (Van Zee, Economon) and in scrap army vehicles from Saipan and Guam at Houston, Texas (Slobodnik). Living pupae of the citrus blackfly (Aleurocanthus woglumi) were intercepted recently on Citrus aurantifolia leaves in cargo from Mexico at San Pedro, Calif. (Stowell).

FOREST INSECTS

VARIABLE OAK LEAF CATERPILLAR (Heterocampa manteo) - MISSOURI - Outbreak almost completely defoliated at least 800 acres of oak forest during the 1952 season in the Shawnee Bend area on the west side of the Lake of the Ozarks. (P. O. Stone).